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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,902	09/28/2000	Barrie Gilbert	1482-129	8966

7590 12/19/2002

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EXAMINER

NGUYEN, TUNG X

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,902

Applicant(s)

GILBERT, BARRIE

Examiner

Tung X Nguyen

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9, 16-18 and 24 is/are allowed.
- 6) ☐ Claim(s) 2-5, 10-12, 14, 15, 19, 20, 22, 23 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 13 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The amendment filed on 8/15/02 has been entered and made of record as paper number 5. Claim 1 has been canceled, and claims 2-29 are pending.

In view of the above applicant's remarks, the last Office Action dated 02/20/02 has been withdrawn, and the following new ground of rejection is present as follows:

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the power amplifier must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2-5, 22-23, 25-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al. (u.s.p 4,906,836).

As to claims 2-5, 22-23, 29, Yamashita et al. disclose in Fig. 1, a measurement system comprising: a first log amp (LOG1) having a current output (inherent); a second

log amp (LOG2) having a current output (inherent); and coupling to a differencing circuit (AMP1), wherein the differencing circuit is arranged to continuously process output from the first (LOG1) and second (LOG2) log amps; and the differencing circuit (AMP1) having a summing node (at the negative node and the positive node of AMP1).

As to claims 25-27, Yamashita et al. disclose in Fig. 1, steps comprising: logarithmically amplifying (via LOG1) a first input signal, thereby generating a first output signal; logarithmically amplifying (via LOG2) a second input signal, thereby generating a second output signal; differentially processing (via AMP 1) the first (LOG1) and second (LOG2) output signals; and utilizing a signal (via to a negative node of the LOG 1) to be examined as the first input signal; and utilizing a reference signal (via to a negative node of the LOG 2) as the second input signal; further, utilizing a modulated signal (the current I_{s1} feedback to LOG 1 combination with a input current at the negative node at the LOG 1) for the first input signal; and for the second input signal (the current I_{s2} feedback to LOG 2 combination with a input current at the negative node at the LOG 2).

As to claim 28, Yamashita et al. disclose in Fig. 2, the system comprising: a power amplifier (AMP 3) having an input coupled to an input of the first log amp (LOG/R) and an output (e_o) coupled to an input of the second log amp (LOG/G).

5. Claims 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Cosh (u.s.p 4,568,978).

As to claims 14-15, Cosh discloses in Fig. 1, a system comprising: a first log amp (2), a second log amp (3), and third log amp (6) coupled to differencing circuit (4).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-12, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al.(u.s.p 4,906,836).

As to claims 10, 12, 19, 20, Yamashita et al. disclose in Fig. 1, the system comprising: a first log amp (LOG 1), and the second log amp (LOG 2); and wherein the first and second log amps are co-integrated on a substrate in a package. For example, (see the abstract) mentions that "An integrated circuit includes an operational amplifier...the output of the second logarithmic amplifier is connected to the inverting input terminal of the operational amplifier", thus obviously suggesting the first and second log amps are co-integrated on the semiconductor. In regard to claimed "co-integrated on the substrate" it is note that the reference is silent such feature; However, It would have been obvious to a person having ordinary skill in the art at the time the invention that any conventional semiconductor structure could have an co-integrated on the substrate implemented as an inherent design variations, as also well-known in the existing semiconductor technology.

Other claimed feature recited in claim 11 is also obvious subject matter within the knowledge of one skilled in the art over the suggested teaching of Yamashita et al.

Allowable Subject Matter

8. Claims 6-9, 16-18, 24 are allowed.

9. Claims 13, 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Claims 6-9, 16-18, the prior art does not suggest or teaching a first and second log amp having a first limiting, a second limiting output respectively coupling to a phase detector; in combination with the other claimed elements.

Claim 24, the prior art does not suggest or teaching a first and second output signals from log amps respectively are limiting output signals; and differentially processing the first and second output signals comprising multiplying the first and second output signals; in combination with the other claimed elements.

Claim 13, the prior art does not suggest or teaching a first parasitic network and second parasitic network coupling to the first and second log amp respectively, and wherein the first and second parasitic networks have similar frequency responses; in combination with the other claimed elements.

Claim 21, the prior art does not suggest or teaching a phase detector coupled to two or more log amps; in combination with the other claimed elements.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X Nguyen whose telephone number is (703) 305-3337. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703)-308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5841 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

TN

December 11, 2002